PLANTAE COLOMBIANAE,—I.

A NEW SPECIES OF *HERRANIA* FROM THE PUTUMAYO

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During the course of ethnobotanical investigation in the upper Putumayo in southern Colombia (*), the writer collected an interesting species of *Herrania*. Upon examination, this species proves to be undescribed. A description and critical comments relative to the relationships of this new species are herein presented together with a diagnostic drawing of the plant and its floral parts.

It is of interest to note that until recently the genus *Herrania* of the Sterculiaceae has been relatively small, with only five species having been reported from Colombia. As a result of recent studies, seven species are now included in the list of Colombian species of *Herrania:*

Herrania albiflora Goudot in Ann. Sci. nat. Ser. iii, 2 (1844) 230, t. 5.

H. Mariae Goudot ibid. 233. *Theobroma Mariae* (Goudot) Schumann in Martius Fl. Brasil, fasc. xcvi (1886) 71, t. 15.

H. pulcherrima Goudot ibid. 232.

H. aspera Karsten in Linnaea 28 (1856) 446.

H. laciniifolia Goudot ex Triana et Planchon apud García-Barriga in Caldasia 2 (1941) 55, t. 1, 4.

H. Cuatrecasana García-Barriga in Caldasia 2 (1941) 57, t. 2.

H. Dugandii García-Barriga ibid. 59, t. 3.

Several of the foregoing specific concepts are imperfectly understood. The entities to which the names *Herrania albiflora, H. pulcherrima* and *H. aspera* refer are not known with certainty and probably cannot be clarified until the types are studied. Triana & Planchon (Prodr. Fl. Novogranat (1862) 209), considered *H. albiflora* and *H. pulcherrima* as dis-

(*) Carried out under the auspices of the National Research Council, Washington, D. C.

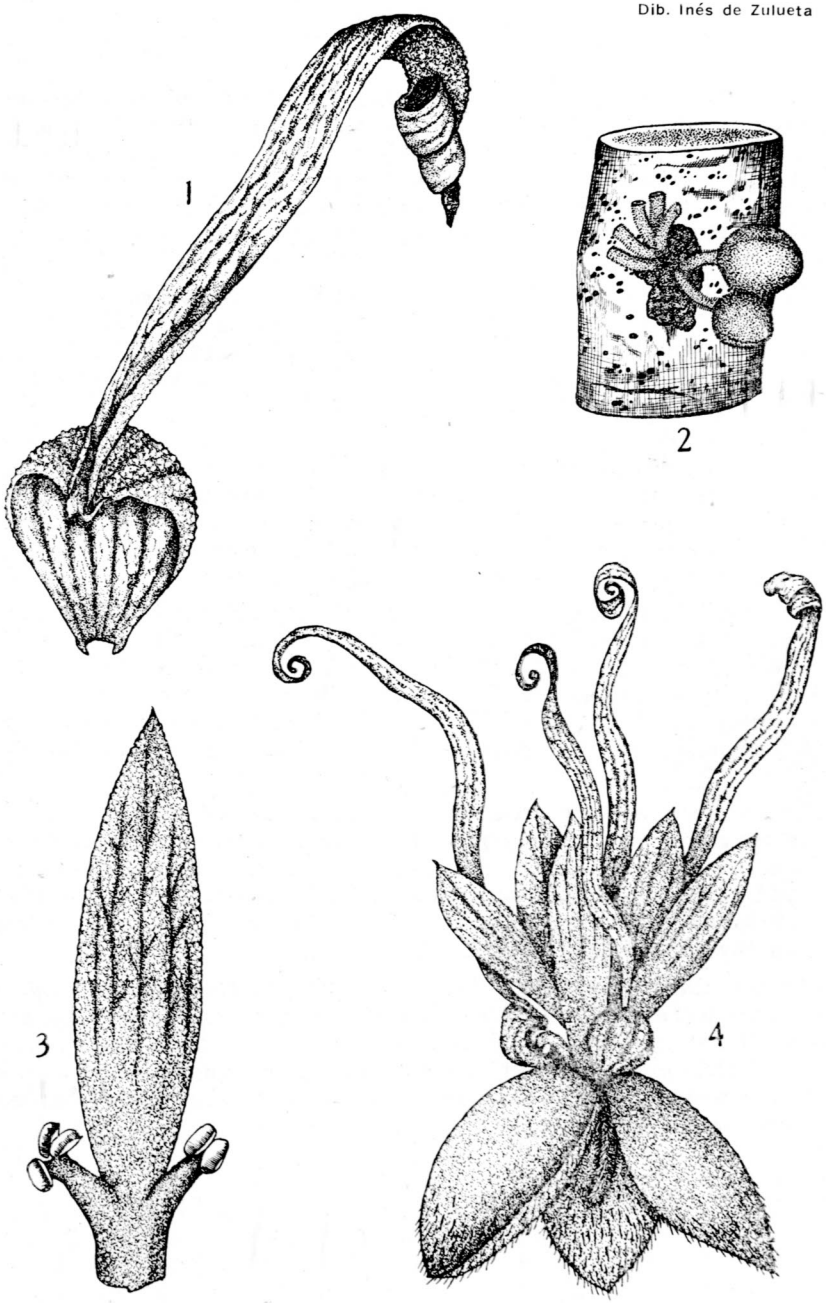
tinct and *H. aspera* as a synonym of *H. pulcherrima*. Dr. E. P. Killip, of the Smithsonian Institution, in a communication to Prof. José Cuatrecasas, states that *H. albiflora* and *H. pulcherrima* may possibly be referrible to *H. Mariae*. None of these three species *(H. albiflora, H. pulcherrima* and *H. aspera)* appears to be closely allied to the species about to be described. For this reason, I have not included these three entities, of which I have not seen authentic material, in the summary at the end of this article. Similarly, *H. laciniifolia,* which is entirely distinct and unrelated, is omitted.

I wish to thank Prof. Armando Dugand, director of the Instituto de Ciencias Naturales, for his kind invitation to publish the following description in CALDASIA. I also wish to thank Miss Inés de Zulueta for her carefully executed drawing of the new species.

Herrania breviligulata R. E. Schultes, sp. nov.

Arbuscula parva, tenuis gracilisque usque ad plus minusve quindecim pedes alta; erecto cum trunco tereti circiter 6-7 cm. diametro, cinereofusco cum cortice rimoso scrobiculato obtecta; ad apicem trunci parce ramosa; ramis ut videtur tomentosis sed cito glabratis. Ramuli dense villosi, ferrugineis cum pilis, sub-glabrescentes. Folia ampla, digitata, longissime petiolata, quatuor- vel quinque-foliolata. Petioli teretes, basi leviter dilatati, subferruginei tomentellique, usque ad 46 cm. longi, plus minusve 0.5 cm. diam. Foliola sessilia inaequalia, lanceolato-oblonga, margine integra; laminis firme chartaceis vel papyraceis, plerumque 20-40 cm. longis, 6-30 cm. latis, apice in cuspidem vel mucronem plus minusve angustum acutissimum usque ad 3 cm. longum productis, basi longe sensim attenuato-decurrentibus, utrinque sed subtus magis puberulis: supra viridibus claris, sparsissime minuteque stellato-pubescentibus, albis cum pilis, subtus viridibus pallidis, omnino molliter dense stellato-villoso-sericeis; costa nervisque utrinque sed subtus magis prominenter elevatis et fulvo-tomentosis. Inflorescentiae fasciculatae, 6-8 florae. Flores caulinares ex trunco superiore orti in racemis contractis prorumpentes, colore atropurpurei, pedicellati. Pedicelli plerumque 5-7 mm. longi. densissime fulvo-tomentosi, articulati, basi brevi cum bractea lineari densissime fulvo-tomentosa, 1-1.5 mm. longa, subtenti. Alabastrus floris globosus, 4-9 mm. diam., densissime ferrugineo-villosus. Calyx trifidus, fere usque ad basim divisus, subcymbiformis. Sepala 3, late elliptico-oblonga, apice obtusa margine laeviter revoluta, atropurpurea, 13-14 mm. longa, 7-9 mm. lata, intus sparsissime pilosula vel glabraescentia, extus subdense cum pilis stellatis longis albisque obtecta, aestivatione valvata. Petala 4, basi sessilia, obovata, 6-7 mm. longa, 5-6 mm. lata, concava, apice valde cucullata, utrinque sed extus magis muricato-papillosa vel granulosa, quinquenervia, longitudinaliter striato-venosa, intus prominentibus cum venis, atropurpurea, superne in ligulam prolongata. Petalorum ligulae lineares, 25-35 mm. longae, 1.5-2 mm. latae, pendulae, basi vix et abrupte contractae, apice laeviter intortae sed in alabastro spiraliter valde intortae, trinerviae, colore ochrorubrae, purpureis cum nervis, minutissime muricato-papillosae vel granulosae. Tubus stamineus quinquedivisus, diantheri-

Dib. Inés de Zulueta



Herrania breviligulata R. E. Schultes

1. Petal and ligule 4X. 2. Section of trunk showing inflorescence, nat. size.
3. Stamens and staminodium 4X. 4. Flower 2X.

feris cum staminibus et simplicibus cum filamentis brevibus liberisque. Staminodia conspicua, petaloidea, atrosanguinea, lanceolato-elliptica, acuta, margine, integra, utrinque muricato-granulosa, 15 mm. longa, 4 mm. lata, atropurpurea. Pistillum 2.8 mm. longum. Stylus teres, simplex, purpurascens, stigmate apice profunde quinquefido. Ovarium sessile, 5-loculare, densissime pilosum, ochro-pallidum, subglobosum, 3 mm. longum, 2 mm. latum. Fructus ignotus, sed ochro-pallidus maturitate dicitur.

COLOMBIA: Crescit in silvis aboriginibus, umbrosis pluviosisque in Commisaria *Putumayo* in vicinitate civitatulae *Mocoa,* 850 metr.; legit *Richard Evans Schultes et C. Earle Smith 2050,* 6 Dec. 1941. TYPUS in Herbario Botanicae Economicae "Oakes Ames" in Universitae Harvardiana; TYPUS DUPLICATUS in Herbario Nationali Colombiae.

Herrania breviligulata is at once set apart from all other recognized species by conspicuous characters in the inflorescence and flower (ligules, petals, staminodia, etc.). The ligules are the shortest of any known in the genus and, with the single exception of *H. laciniifolia* wich is not allied to this new species, *H. breviligulata* has the smallest fascicle with only six or eight flowers borne on very short pedicels.

H. breviligulata appears to be most closely related to *H. Cuatrecasana* and *H. Dugandii.* These two species are found in the same general region where the type of *H. breviligulata* was collected - the upper Putumayo. It is apparent that the Putumayo is the centre of a complex of several closely allied species of *Herrania.* With further exploration of this and adjacent regions, it is possible that additional species will be discovered.

The more important characters of *Herrania breviligulata* and related species are compared in the tabular conspectus which is found at the end of this article. The conspectus is based on an examination of the descriptions and types of *H. Cuatrecasana* and *H. Dugandii* and on a study of the description and critical drawing of *H. Mariae (Theobroma Mariae)* in Flora Brasiliensis fasc. xcvi, t. 15.

Among the Inga-speaking Indians of Mocoa, *Herrania breviligulata* is called *sácha-cacáo* ("wild cacao") and the fruits are said to be eaten occasionally. It is interesting to note that the close relationship between species of *Herrania* and *Theobroma* is widely recognized. Several other species are referred to in Colombia by the names: *cacao montaraz, cacao cimarrón, cacaíto de monte.*

CONSPECTUS SPECIERUM GENERIS HERRANIA HERRANIAE BREVILIGULATAE AFFINORUM

	H. breviligulata	**H. Cuatrecasana**	**H. Dugandii**	**H. Mariae**
HABITUS	Arbuscula; 5 m.	Arbuscula; 4 m.	Arbuscula; 3 m.	Arbor; 6-9 m.
FOLIA	4-5 digitata	7-digitata	7-digitata	7-9-digitata
FOLIOLA	Oblanceolato-oblonga; apice acuminata; margine integra; utrinque puberula	Oblanceolato-oblonga; apice acute acuminata; ex crenaturis denticulata; utrinque puberula	Oblanceolato-oblonga; apice acuta vel subacuminata; fere margine integra; supra glabra; subtus puberula	Oblanceolato-oblonga; apice acuminata; ex crenaturis denticulata; utrinque puberula
INFLORESCENTIA	pauciflora; 6-8-flora	multiflora; 80-90-flora	multiflora; 15-20-flora	multiflora; 50 vel plus
PEDICELLI	5-7 mm. longi	20-30 mm. longi	usque ad 10 mm. longi	usque ad 16 mm. longi
SEPALA	3; oblonga; obtusa; 13-14 x 7-9 mm. atropurpurea	3; oblonga; obtusa; 15-18 x 7-10 mm. atropurpurea	3; oblonga; obtusa; usque ad 21 x 12 mm. atropurpurea	2-5; oblonga; obtusa; 12 x ± 7 mm. puniceo-purpurea
PETALA	cucullato-obovata; 6-7 x 5-6 mm.; atropurpurea; muricato-papillosa	cucullato-obovata; 10-11 x 7-8 mm.; purpurea; muricato-papillosa	cucullato-obovata; 11-12 x 5-6 mm.; atropurpurea; muricato-papillosa	cucullata-orbiculata; 6 x 5 mm.; purpurea (?) .....
LIGULAE	lineares; 25-30 x 1.2-2 mm.	filiformes; 130 x 1.5 mm.	filiformes; 100 x 2 mm.	filiformes; 100 x 1.2 mm.
STAMINODIA	lanceolato-elliptica; apice acuta; 14 x 4 mm.; atropurpurea	rhomboideo-lanceolata; apice obtusiuscula vel acuta; 25 x 8 mm.; purpurea	anguste-lanceolata; apice acutissima; 12-15 x 5 mm.; atropurpurea	lanceolata; apice acuta et serrata; 10.5 x 4.3 mm.; atrosanguinea (?)
OVARIUM	subglobosum; 3 x 2 mm.; pilosum	ovoideum; 2 mm. longum; pilosum	subglobosum; 4 x 3 mm.; pilosum	ovoideum; ..... pilosum

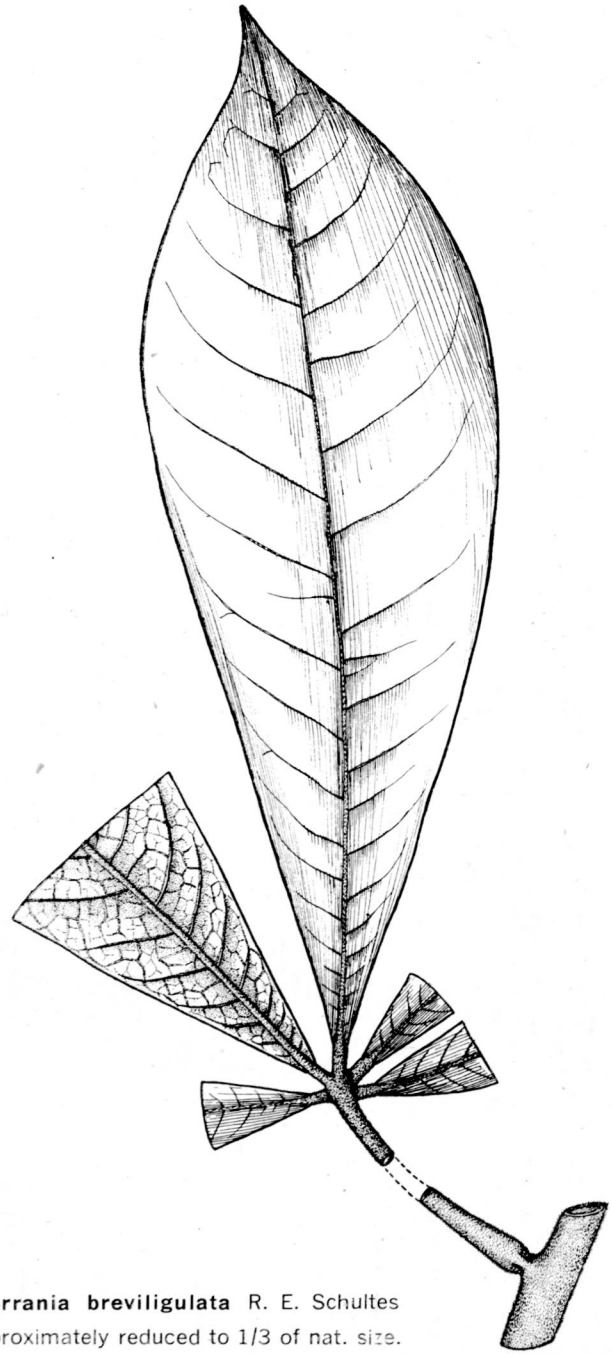


Fig. 5. **Herrania breviligulata** R. E. Schultes
Leaflet, approximately reduced to 1/3 of nat. size.

Dib. Inés de Zulueta